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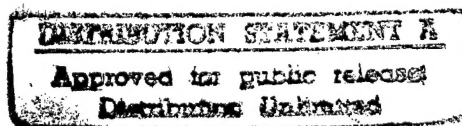
Supportability Investment Decision Analysis Center

Contract Number F33657-92-D-2055
CDRL Item A009, Data Item Mgmt-80057
Report No. SID/MR-94/0040
(Unclassified)

TASK ASSIGNMENT PLAN

for

**Additional Engines in
ELAM and General
Improvements for the
LAMs**



Prepared for

HQ USAF/LGSI
1030 Air Force Pentagon
Washington, DC 20330-1030

Prepared by

Synergy, Inc.
1763 Columbia Road, NW
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17 November, 1994

Submitted by

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28 October 1994

Maj Randy Moller
HQ USAF/LGSI
1030 Air Force Pentagon
Washington, DC 20330-1030

Dear Maj Moller:

Contract F33657-92-D-2055
SIDAC Task No. 94
Delivery Order No. 0077
CDRL A009, Data Item MGMT-80057

Enclosed is the Task Assignment Plan for *Additional Engines in ELAM and General Improvements for the LAMs*, as required under the above-referenced contract.

If you have questions, please contact me at 202-232-6261.

Sincerely,

A handwritten signature in black ink, appearing to read "James A. Lutz", is written over a horizontal line.

James A. Lutz
Task Leader

JAL/las

c: DCMAO (Mr. Leon Sulton) Letter Only
SIDAC (Mr. Heston Hicks)

Contract No. F33657-92-2055/0077
SIDAC Task Number 94 (DO 0077)
CDRL No. A009, Data Item DI-MGMT-80057

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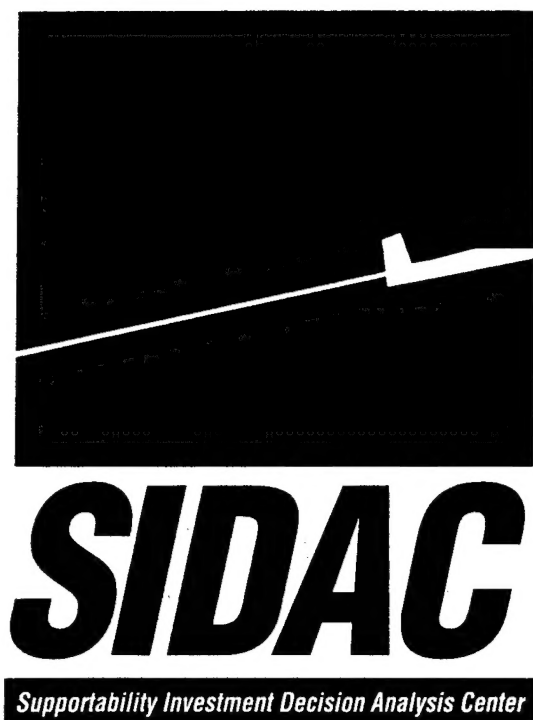
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INTRODUCTION

Synergy will fulfill the HQ USAF/LG requirement to maintain and continue to develop the Engine Logistics Assessment Model (ELAM). ELAM will be used to assess the current and expected peacetime readiness and wartime sustainability based on past, current, and projected logistics metrics as well as funding for logistics resources.

GOALS AND OBJECTIVES

Synergy will modify the ELAM and Windows Integrated Logistics Assessment Model (WINLAM) by expanding the capability of these models to improve accuracy of the peacetime and wartime logistics assessments they provide in support of the Weapon System Program Assessment Review (WSPAR) and Sustainment Executive Management Report (SEMR) programs. Synergy will incorporate the final nine engines in the ELAM model. Synergy will modify the WINLAM File Management Structure (FMS) and an aggregation function to separate engines according to their associated aircraft weapon systems and run assessments with both the peacetime availability calculator and the wartime distribution integrator developed for the other nine engines.

Synergy will modify WINLAM to provide the capability to quickly change input data while in the report window to facilitate the System Program Directors (SPDs) in performing assessments. Synergy will also modify the FAMMAS output module to produce reports in the format required by HQ USAF/LGSW.

TECHNICAL APPROACH

Upon completion of the contract to implement the first nine additional engines in ELAM, Synergy will integrate the next five engines from the priority list generated by SA-ALC/LR in conjunction with HQ USAF/LGMY. The list includes the following:

- F108
- T700
- J79
- F107

Synergy will incorporate these engines into ELAM through a process of research, design, testing, and validation. Synergy will modify the structure and/or algorithms of the existing ELAM if research deems necessary. Synergy will also update all documentation, provide training for all new users of ELAM, and deliver the updated model to all engine managers.

The incorporation of these engines into ELAM will be accomplished in two phases. In Phase 1, preliminary research will be conducted on all candidates for incorporation. During this time, Synergy will visit all engine managers to brief them on the model, gather the data needed to assess each engine, determine which engines can be grouped together for incorporation, and uncover any economies of scale in the incorporation process. Phase 2 will involve the actual incorporation of new engines into the model. This phase can be broken down into three tasks: Additional Research, Design/Coding, and Testing/Validation. Some engines may undergo this process simultaneously if certain groups of engines demonstrate sufficient similarities.

WINLAM will be modified to provide the capability for the user to dynamically change input data and observe the results without leaving the report screen. FAMMAS will be modified to produce reports in the format required by HQ USAF/LGSW. LGSW personnel will be interviewed to determine the appropriate reports. All modified software will be tested, verified, and validated according to AF/XOM standards for Verification, Validation, and Accreditation.

PROJECT SCHEDULE AND MILESTONES

The Work Breakdown Structure (WBS) in Figure 1 represents Synergy's proposed timeline for accomplishing the tasks associated with the statement of work. Synergy will apply the most experienced personnel on this project and will produce the best products possible within the time and funds allocated by the government. The Synergy program manager will prioritize the efforts for the tasks to make the most efficient and effective use of available resources.

DELIVERABLES

The following list of deliverables will be submitted for the efforts performed under this task:

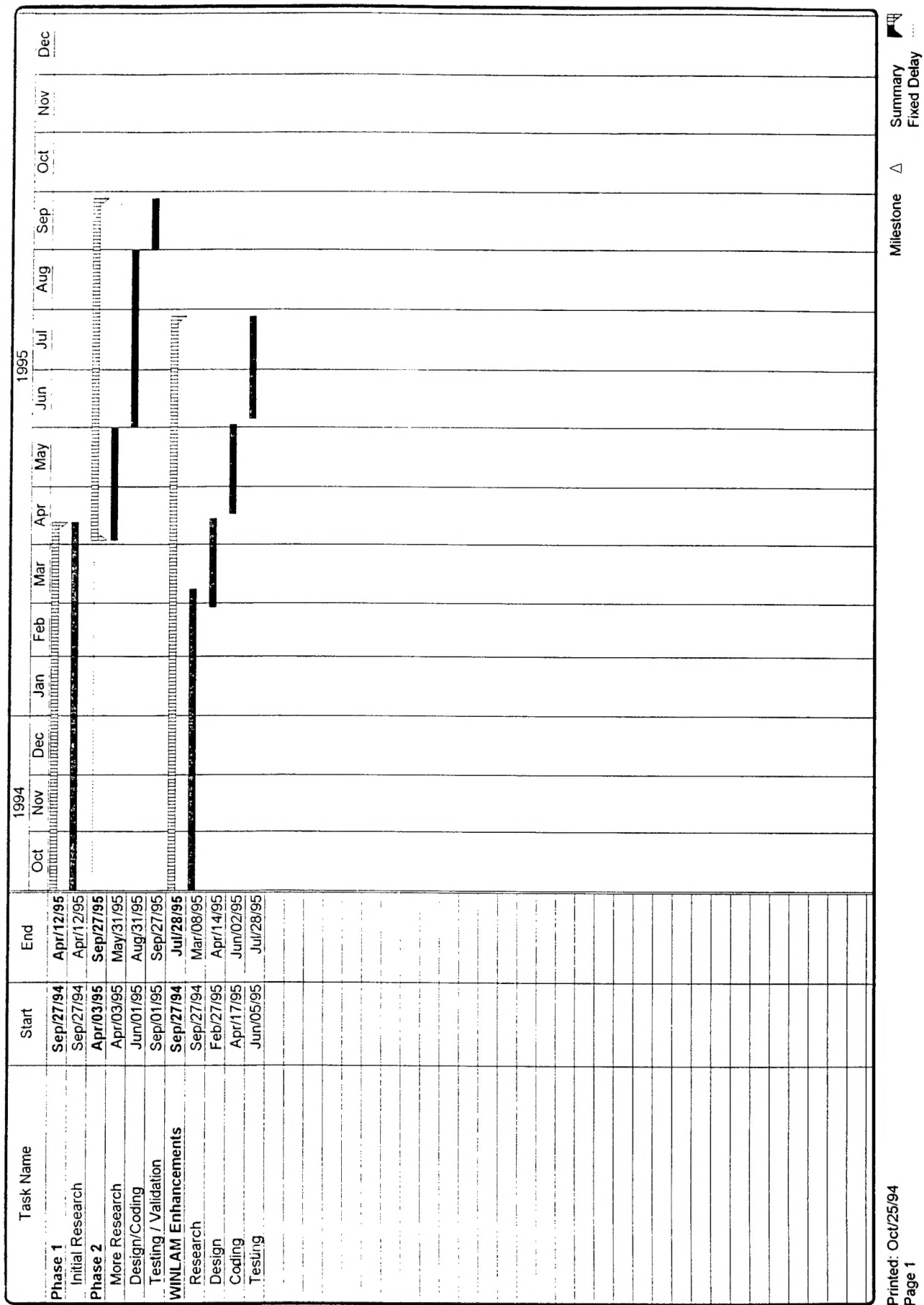
- (1) Final technical report (CDRL A001) on the task to describe the efforts and results that went into the accomplishment of the task.
- (2) Monthly progress and status reports (CDRL A004) submitted every thirty (30) days throughout the duration of the contract. These reports will keep the SIDAC COTR informed of the progress of the task on a monthly basis.
- (3) Software users manual (CDRL A006) to aid in the instruction and use of the software.
- (4) The software (CDRL A007) necessary to complete the task.
- (5) Presentation material (CDRL A007), which consists of a final briefing on the task results.
- (6) Task Assignment Plan (CDRL A009), presented in this document, which covers the objectives, technical approach, and schedule for performance of the statement of work.

PROJECT STAFFING AND EXPERIENCE

This project will be staffed with extremely well qualified personnel. The education, capabilities, and experience of key personnel are summarized here.

Mr. James A. Lutz, Program Manager, Ph.D. program in Mathematics and graduate studies in operations research and statistics. He has more than 20 years of experience in logistics management, capability assessment, program and budget analysis, and operations analysis. As a member of Synergy's Operations Management Committee, he directs the performance of work on all Synergy contracts. He specializes in the development and application of quantitative models for analysis of policies in logistics management, budgeting, capability assessment, and reliability and maintainability.

Mr. Raymond L. Reed, Sr. Logistics Management Specialist, M.S. Organic Chemistry. Mr. Reed has more than 20 years experience in Air Force logistics. His areas of expertise include logistics management, tactical systems analysis, and acquisition management. He serves as the project manager for development and implementation of new parametric/interactive models, designed to perform logistics resource assessments of Air Force air mobility and air combat weapon systems. He will serve as the project manager for the tasking described in this document.



Mr. William E. Faragher, Sr. Scientist, M.A. Mathematics. Mr. Faragher has more than 35 years experience in operations research and logistics analysis. He is responsible for the software development for a suite of logistics assessment models designed for estimating the impact of budget decisions on aircraft readiness and sustainability. He directed the development of a data base management system that imports data from a variety of automated sources and generates a set of output files for use in Synergy-developed logistics assessment models. Because of his strong scientific and mathematical background, he will serve as a consultant on this task.

Mr. Glenn L. Archer, Jr., Logistics Management Specialist, B.A. Economics. Mr. Archer is the supervisor for all operations and management assessments for Air Force and Army. He is responsible for completing the development of ELAM, which provides the Air Force with projections concerning the health of their engines inventory. He is responsible for designing, testing, and delivering this model to HQ USAF/LGSI and SA-ALC/LPF.

POINT OF CONTACT

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